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| 09/805,597      | 03/12/2001  | Maria Cristina B. Estacio | 18865005800         | 9290             |

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EXAMINER

LEWIS, MONICA

ART UNIT PAPER NUMBER

2822

DATE MAILED: 11/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/805,597

Applicant(s)

ESTACIO, MARIA CRISTINA B.

Examiner

Monica Lewis

Art Unit

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PW

-- The MAILING DATE of this communication appears on the cover sheet with the corresponding address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04 August 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4,7 and 8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4,7 and 8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 04 August 2003 is: a) ☒ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 11.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

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### **DETAILED ACTION**

1. This action is in response to the amendment filed August 4, 2003.

#### ***Response to Arguments***

2. Applicant's arguments with respect to claims 1-4, 7 and 8 have been considered but are moot in view of the new ground(s) of rejection.

#### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 4, 7 and 8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is not clear what is meant by the following: a) "side rail" (See Claims 4, 7 and 8).

#### ***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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6. Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Pavier (U.S. Publication No. 2002/0096748).

In regards to claim 1, Pavier discloses the following:

a) a leadframe (20) including a plurality of leads extending therefrom, a first source attach area on a first surface of the leadframe and a first gate attach area, and a second source attach area on a second surface of the leadframe and a second gate attach areas (For Example: See Figure 3, Figure 7, Paragraphs 26 and 27);

b) at least two dies (30 and 31), a first die being electrically coupled to the first source and gate attach areas of the leadframe and a second die being electrically coupled to the second source and gate attach areas (For Example: See Figure 2 and Figure 3);

c) a drain connection assembly coupled to a drain region (D) (For Example: See Figures 4-6 and Paragraph 26);

d) a body (40) being around at least a portion of the first die and the second die, such that at least a portion of the first die and the second die, such that at least a drain region of the second die is exposed by the body (For Example: See Figure 1, Figures 4-7); and

e) wherein the first and second dies are in a stacked relationship and are at opposite sides of the leadframe, and wherein the drain region of the first die faces away from the leadframe and the drain region of the second die faces away from the leadframe (For Example: See Figure 2).

### ***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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8. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as obvious over Pavier (U.S. Publication No. 2002/0096748) and Kinsman (U.S. Patent No. 5,789,803).

In regards to claim 2, Pavier fails to disclose the following:

a) at least one of the dies is a bumped die.

However, Kinsman discloses a semiconductor device that has a bumped die (For Example: See Column 2 Lines 10-13). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the semiconductor of Pavier to include bumped die as disclosed in Kinsman because it aids in providing an electrical connection (For Example: See Column 2 Lines 10-13).

Additionally, since Pavier and Kinsman are both from the same field of endeavor, the purpose disclosed by Kinsman would have been recognized in the pertinent art of Pavier.

In regards to claim 3, Pavier fails to disclose the following:

a) dies are bumped dies.

However, Kinsman discloses a semiconductor device that has a bumped die (For Example: See Column 2 Lines 10-13). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the semiconductor of Yea to include bumped die as disclosed in Kinsman because it aids in providing an electrical connection (For Example: See Column 2 Lines 10-13).

Additionally, since Pavier and Kinsman are both from the same field of endeavor, the purpose disclosed by Kinsman would have been recognized in the pertinent art of Pavier.

9. Claim 4, as far as understood, is rejected under 35 U.S.C. 103(a) as obvious over Pavier (U.S. Publication No. 2002/0096748) in view of Standing et al. (U.S. Publication No. 2001/0048116).

In regards to claim 4, Pavier discloses the following:

a) the drain connection assembly comprises a side rail (For Example: See Figure 3).

In regards to claim 4, Pavier fails to disclose the following:

a) a drain clip.

However, Standing et al. ("Standing") discloses a semiconductor device that has a drain clip (For Example: See Page 1 Paragraph 9 and Page 3 Paragraph 48). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the semiconductor of Pavier to include a drain clip as disclosed in Standing because it aids in providing coupling to the drain (For Example: See Page 1 Paragraph 9 and Page 3 Paragraph 48).

Additionally, since Pavier and Standing are both from the same field of endeavor, the purpose disclosed by Standing would have been recognized in the pertinent art of Pavier.

10. Claims 7 and 8, as far as understood, are rejected under 35 U.S.C. 103(a) as obvious over Pavier (U.S. Publication No. 2002/0096748) in view of Standing et al. (U.S. Publication No. 2001/0048116) and Anzai (Japanese Patent No. 409116070).

In regards to claim 7, Pavier discloses the following:

a) the drain connection assembly comprises a side rail (For Example: See Figure 3).

In regards to claim 7, Pavier fails to disclose the following:

a) a drain clip.

However, Standing et al. ("Standing") discloses a semiconductor device that has a drain clip (For Example: See Page 1 Paragraph 9 and Page 3 Paragraph 48). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the semiconductor of Pavier to include a drain clip as disclosed in Standing because it aids in providing coupling to the drain (For Example: See Page 1 Paragraph 9 and Page 3 Paragraph 48).

Additionally, since Pavier and Standing are both from the same field of endeavor, the purpose disclosed by Standing would have been recognized in the pertinent art of Pavier.

b) v-groove.

However, Anzai discloses a semiconductor device that has a v-groove (For Example: See Abstract). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the semiconductor of Pavier to include a v-groove as disclosed in Anzai because it aids in eliminating meander (For Example: See Abstract).

Additionally, since Pavier and Anzai are both from the same field of endeavor, the purpose disclosed by Standing would have been recognized in the pertinent art of Anzai.

In regards to claim 8, Pavier discloses the following:

a) the drain connection assembly comprises a side rail (For Example: See Figure 3).

In regards to claim 8, Pavier fails to disclose the following:

a) a copper drain clip.

However, Standing discloses a semiconductor device that has a copper drain clip (For Example: See Page 1 Paragraph 9, Page 2 Paragraph 42 and Page 3

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Paragraph 48). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the semiconductor of Pavier to include a copper drain clip as disclosed in Standing because it aids in providing coupling to the drain (For Example: See Page 1 Paragraph 9 and Page 3 Paragraph 48).

Additionally, since Pavier and Standing are both from the same field of endeavor, the purpose disclosed by Standing would have been recognized in the pertinent art of Pavier.

b) v-groove.

However, Anzai discloses a semiconductor device that has a v-groove (For Example: See Abstract). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the semiconductor of Pavier to include a v-groove as disclosed in Anzai because it aids in eliminating meander (For Example: See Abstract).

Additionally, since Pavier and Anzai are both from the same field of endeavor, the purpose disclosed by Standing would have been recognized in the pertinent art of Anzai.

### ***Conclusion***

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

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CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Monica Lewis whose telephone number is 703-305-3743.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amir Zarabian can be reached on 703-308-4905. The fax phone number for the organization where this application or proceeding is assigned is 703-308-7722 for regular and after final communications. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

ML

November 1, 2003

  
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